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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/004,120

12/06/2001

Daniel Joseph Wolff

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8027

7590

01/20/2006

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EXAMINER

AVELLINO, JOSEPH E

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,120

Applicant(s)

WOLFF ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-45 are pending in this examination; claims 1, 10, 16, 31, and 40 independent.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 8, 2005 has been entered.

Terminal Disclaimer

3. The terminal disclaimer filed on December 8, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of commonly owned application no. 10/003,265 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12, 16-27, and 31-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al. (USPN 6,760,765) (hereinafter Asai) in view of Hailpern et al. (USPN 6,275,937) (hereinafter Hailpern) in view of Grantages, Jr. et al. (USPN 6,510,464) (hereinafter Grantages).

5. Referring to claim 1, Asai discloses a load balancing device (Figure 1, ref. 20) for balancing the load across a plurality of proxy devices (i.e. cache servers, Figure 1, ref. 101, 102, 10n), the computer network having a plurality of client devices (terminals, Figure 1, ref. 41-4n) arranged to issue access requests using a dedicated file access protocol to the file storage device (content server, ref. 30) in order to access files stored on the file storage device, and comprising:

- a client interface for receiving an access request issued to the file storage device using the dedicated file access protocol (Figure 1, ref. 21; col. 12, lines 38-48);

- load balancing logic for applying a predetermined load balancing routine to determine which proxy device to direct the access request (col. 15, line 66 to col. 16, line 56);

- a proxy device interface for sending the access request to the proxy device determined by the load balancing logic, each proxy device being coupled to the file storage device (Figure 1, all; col. 15, line 66 to col. 16, line 66);

- wherein each proxy device comprises

- a first interface for receiving from the load balancing device an access request issued by one of said client devices to said file storage device using the

dedicated file access protocol (i.e. interface of cache server 101 connecting network 52 to the cache server, this is an inherent feature of the cache server, otherwise there would be no way the device can access the network 52) (Figure 1, arrows between network 52 and server 101);

a second interface for communicating with the file storage device to cause the file storage device to process the access request (i.e. interface of cache server 1010 to connect to network 53 which is connected to the content server 30, this is an inherent feature of the cache server, otherwise the server would not be able to communicate over the network) (Figure 1, arrows between server 101 and network 53);

Asai does not specifically state that the proxy devices are arranged to perform malware scanning of files stored within a file storage device. In analogous art, Hailpern discloses another load balancing proxy server system which is arranged to perform malware scanning (i.e. virus scanning) of files stored within a file storage device (col. 11, lines 16-60). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hailpern with Asai since Asai discloses that the number of streams currently being distributed by the cache server can be reported to the cluster control unit 21, however other methods can be implemented (col. 24, lines 55-67). This would lead one of ordinary skill in the art to search for other methods of communicating load distribution information to the load balancing unit, eventually finding the system of Hailpern and its novel system of communicating load level information using the PICS protocol (col. 10, lines 40-64).

Asai in view of Hailpern do not specifically disclose upon receipt of an access request, the processing logic is arranged to determine from the access request predetermined attributes, and to send those attributes to the file storage device to enable to device to perform a validation check, the logic only allowing the access request to proceed if the file storage device confirms that the client device is allowed to access the file identified by the file access request and that a user cache is utilized for storing the predetermined attributes. In analogous art, Grantages discloses another proxy network device (i.e. DMZ proxy) which is arranged to determine from the access request predetermined attributes (i.e. digital certificate), and to send those attributes to the file storage device (i.e. proxy server 40 and Authorization server 46) to enable to device to perform a validation check (i.e. examine the information contained in the x.509 digital certificate), the logic only allowing the access request to proceed if the file storage device confirms that the client device is allowed to access the file identified by the file access request (i.e. once, and only once, the user is authenticated by both proxies, the file access request is allowed within the Firewall) and that a user cache (i.e. authorization server 46) is utilized for storing the predetermined attributes (col. 4, lines 33-65). It would have been obvious to one of ordinary skill in the art to combine the teaching of Grantages with Asai and Hailpern in order to improve security external to a firewall before granting access to the network as supported by Grantages (col. 2, lines 48-59).

6. Referring to claim 2, Asai in view of Hailpern in view of Grantages disclose the invention substantively as described in claim 1. Asai in view of Hailpern in view of Grantages do not specifically disclose the dedicated file access protocol is the SMB protocol and the access requests are SMB calls issued to the file storage device.

“Official Notice” is taken that both the concepts and advantages of providing for access requests using the SMB protocol are well known and expected in the art. It would have been obvious to one of ordinary skill in the art to incorporate the teaching of the SMB protocol to the combined system of Asai and Hailpern in order to provide another method to access the file storage system, thereby increasing the availability of the system to other devices using this protocol.

7. Referring to claim 3, Asai in view of Hailpern in view of Grantages disclose the invention substantively as described in claim 1. Asai in view of Hailpern in view of Grantages do not specifically disclose the dedicated file access protocol is the NFS protocol and the access requests are NFS calls issued to the file storage device.

“Official Notice” is taken that both the concepts and advantages of providing for access requests using the NFS protocol are well known and expected in the art. It would have been obvious to one of ordinary skill in the art to incorporate the teaching of the NFS protocol to the combined system of Asai and Hailpern in order to provide another method to access the file storage system, thereby increasing the availability of the system to other devices using this protocol.

8. Referring to claim 4, Asai in view of Hailpern disclose the invention substantively as described in claim 1. Asai in view of Hailpern do not specifically state that the load balancing is arranged to poll each of the plurality of proxy devices and the access request to be sent to the first responding proxy device. "Official Notice" is taken that both the concept and advantages of providing for first response request handling is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to provide for first response request handling since Asai discloses that other methods of load balancing can be used (col. 24, lines 55-67), which would lead one of ordinary skill in the art to search for other methods of load balancing, eventually learning through common knowledge of the use of first response request handling.

9. Referring to claim 5, Asai in view of Hailpern in view of Grantages disclose the invention substantively as described in claim 1. Asai in view of Hailpern in view of Grantages do not specifically state that the load balancing is to apply a "round-robin" system of allocation. "Official Notice" is taken that both the concept and advantages of providing for round-robin request handling is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to provide for first response request handling since Asai discloses that other methods of load balancing can be used (col. 24, lines 55-67), which would lead one of ordinary skill in the art to search for other methods of load balancing, eventually learning through common knowledge of the advantages of round-robin request handling in a distributed allocation system.

10. Referring to claim 6, Asai discloses the proxy device interface is arranged to receive a ready signal from each proxy device in said plurality indicating that proxy device is ready to receive an access request, the load balancing routing being arranged to refer to said ready signals when determining to which proxy device to direct a particular access request (col. 17, lines 10-47).

11. Referring to claim 7, Asai discloses each device is assigned an identifier (i.e. IP address, an inherent feature of any network), and the load balancing device is assigned the same identifier as is assigned to the file storage device (an inherent feature of a server-side proxy farm is that the gateway has the address on the Internet which is used for the content server, thereby ensuring that the load balancer is not bypassed to get to the content server), the client interface being connectable to a communication infrastructure (Figure 1, ref. 51) to enable communication between the load balancing device and said client devices, while the plurality of proxy devices are connectable to the proxy device interface (Figure 1, ref. 52), and the file storage device is connectable to each proxy device (Figure 1, ref. 53), such that the file storage device 30 is only accessible by said client devices 41-4n via said load balancing device 20 and one of said proxy devices 101-10n (col. 12, lines 38-67).

12. Referring to claim 8, Asai in view of Hailpern in view of Grantages disclose the invention substantively as described in the claims above. Asai in view of Hailpern in view of Grantages do not specifically disclose a plurality of file storage devices and the

load balancing device being assigned multiple identifiers corresponding to the identifiers of the storage devices. However it has been held that it would be obvious to replicate features to produce repeated results. See *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (7th Cir. 1977). Furthermore it is well known that a device may have multiple addresses assigned to itself (i.e. a cache server may cache hits from a plurality of addresses mutually exclusive of any other server on the network). By this rationale it would have been obvious to provide multiple addresses for file storage devices in order to handle services pertaining to those servers.

13. Referring to claim 9, it is inherent to the system of Asai in view of Hailpern in view of Grantages that each device is assigned an identifier (i.e. MAC address) unique from all others. Without this, network communications would be impossible since no computer would receive information directed to the computer.

14. Claim 10 is rejected for similar reasons as stated above. Furthermore Hailpern discloses processing logic for causing selected malware scanning algorithms to be executed to determine whether the file identified by the access request is to be considered as malware (col. 10, line 11 to col. 62).

15. Referring to claim 11, Asai discloses the invention substantively as described in claim 10. Asai does not disclose determining which malware scanning algorithms should be selected for a particular file, each proxy device further comprising a scanning

engine to execute the malware scanning algorithms by the processing logic. In analogous art, Hailpern discloses another proxy load balancing system which includes determining which malware scanning algorithms (i.e. IBM AntiVirus, processor type 15; or Microsoft Anti-Virus, processor type 5) should be selected for a particular file, each proxy device further comprising a scanning engine (Figure 3, ref. 2040) to execute the malware scanning algorithms by the processing logic (Figure 3; col. 10, line 11, to col. 11, line 65). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hailpern with Asai since Asai discloses that the number of streams currently being distributed by the cache server can be reported to the cluster control unit 21, however other methods can be implemented (col. 24, lines 55-67). This would lead one of ordinary skill in the art to search for other methods of communicating load distribution information to the load balancing unit, eventually finding the system of Hailpern and its novel system of communicating load level information using the PICS protocol (col. 10, lines 40-64).

16. Referring to claim 12, Asai in view of Hailpern in view of Grantages discloses the invention substantively as described in claim 10. Asai in view of Hailpern in view of Grantages further disclose each proxy device further comprises a file cache for storing files previously accessed by the client devices, upon receipt of an access request identifying a file to be read from the file storage device, the processing logic being arranged to determine whether the file identified by the access request is stored in the file cache and if so return the file to the client device via the load balancing device

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without communicating with the file store device via the second interface (Asai, Figure 3, ref. S124; col. 16, lines 44-63).

17. Claims 16-27, 31-42 are rejected for similar reasons as stated above.

Claims 13, 28, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai in view of Hailpern as applied to the claims above, and further in view of Sathyanarayan et al. (USPN 6,304,904) (hereinafter Sathyanarayan).

18. Referring to claim 13, Asai in view of Hailpern disclose the invention substantively as described in claim 12. Asai in view do not specifically state that the file cache is arranged only to store files which have been determined not to be considered as malware. In analogous art, Sathyanarayan discloses another internet proxy system wherein the file cache is arranged only to store files which have been determined not to be considered as malware (i.e. scan the stream for predetermined content, and delete it if found, and then cache the entry) (col. 5, lines 23-32). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Sathyanarayan with Asai and Hailpern since Hailpern discloses maintaining statistics regarding the reliabilities of the content sources and other aspects of the invention (col. 6, lines 1-5), however remains silent on what statistics are kept and how they are used. This would lead one of ordinary skill in the art to find other methods of statistical record keeping in a proxy server system, eventually finding the system of Sathyanarayan and

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its novel invention of collecting statistics from network devices and maintaining log files containing one or more entries associated with each request serviced (e.g. abstract).

19. Claims 28 and 43 are rejected for similar reasons as stated above.

Claims 14, 15, 29, 30, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai in view of Hailpern as applied to the claims above, and further in view of Webb et al. (US 2002/00833342) (Hereinafter Webb).

20. Referring to claim 14, Asai in view of Hailpern disclose the invention substantively as described in claim 10. Asai in view of Hailpern do not disclose the system is arranged to determine predetermined attributes, and to send those predetermined attributes to the file storage device to perform a validation check, only allowing those with sufficient rights to view the file. Webb discloses an authenticating network wherein the system is arranged to determine predetermined attributes (i.e. credentials in the form of a secure cookie), and to send those predetermined attributes to the file storage device to perform a validation check (i.e. check out the cookie stored on the client device), only allowing those with sufficient rights to view the file (p. 5, ¶ 48). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Webb with Asai and Hailpern to allow a form of security to the system, thereby reducing the likelihood of attacks from malicious users and attempts to hijack the server system.

21. Referring to claim 15, Asai in view of Hailpern disclose the invention substantively as described in claim 10. Asai in view of Hailpern do not disclose comprising a user cache for storing the attributes. Webb discloses an authenticating network which includes a user cache for storing the attributes (i.e. a secure cookie) (p. 5, ¶ 48). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Webb with Asai and Hailpern to allow a form of security to the system, thereby reducing the likelihood of attacks from malicious users and attempts to hijack the server system.

22. Claims 29, 30, 44, and 45 are rejected for similar reasons as stated above.

Response to Arguments

23. Applicants arguments with respect to the rejection under 35 USC 112 have been considered and are persuasive. The rejection is withdrawn.

24. Applicants further arguments dated December 8, 2005 have been fully considered but are moot in view of the new grounds of rejection presented above.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

26. Applicant employs broad language, which includes the use of word, and phrases, which have broad meanings in the art. In addition, Applicant has not argued any narrower interpretation of the claim language, nor amended the claims significantly enough to construe a narrower meaning to the limitations. As the claims breadth allows multiple interpretations and meanings, which are broader than Applicant's disclosure, the Examiner is forced to interpret the claim limitations as broadly and as reasonably possible, in determining patentability of the disclosed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response, and reiterates the need for the Applicant to more clearly and distinctly, define the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

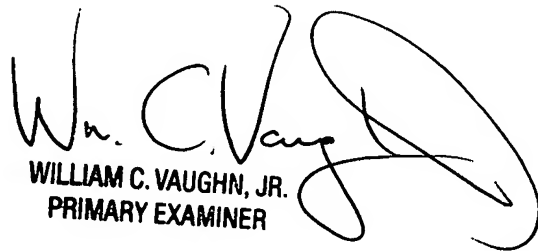
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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JEA
January 6, 2006



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PRIMARY EXAMINER